



August 4, 2023

Project: Pre-construction assessment for lot re-development at 4731 90th Avenue SE, Mercer Island, WA. Parcel number 0191101145.

Contact: Sandra Selby – 4731 90th Avenue SE, Mercer Island, WA 98040
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Objectives: Addendum to Laughing Trees Landscapes report dated 4/17/2022 exploring the limits of impact on the site trees.

Description: The existing home was built in 1959 and the current driveway was created somewhat later. The property was most recently purchased in 2011 and the owners have been working with various architectural firms on a remodeling plan which included changes to the driveway layout. During the planning stages an arborist was hired to provide a tree report.

The previous arborist was unable to continue on the case and Superior NW Enterprise was contacted and asked to assess the potential construction impact on the site trees. This study uses the original nomenclature for consistency's sake. An updated tree table corrected for species and sizes is shown in Figure 1. A tree plot showing the placement of the subject trees in an aerial image is given in the Figure 2. They are indicated on the current survey in Figure 3.

The proposed layout of the remodel is shown in Figure 4. Only the trees along the north side of the lot and the one in front (east) are in the construction impact zone. They will be discussed below.

The #580 birch tree stands 14' E of the east edge and 16' S of the south edge of the existing driveway. The south edge of the new driveway is shown as being 12.5' N of the birch. Accounting for the necessary forms creates an impact line 11.5' away from the base of the tree. This is outside of the reach of any potential structural roots but the tree will lose roughly 100 square feet of its current 3000 square feet of available rooting space. The impact should be minimal and the tree will be fine long term.

The #581 Norway maple is only 58" N of the closest point of the existing driveway which curves into its SE quadrant as shown in Figures 3 and 5. Its roots protrude along the north edge of the driveway in a multiple spots. Extreme care will have to be taken when removing the existing concrete to ensure the maple's roots are not damaged. Once the driveway is lifted the area will have to be immediately covered with 6-8" of arbormulch to protect the exposed roots. This tree will gain close to 70 square feet of rooting space when the project is completed.

The #582 cedar tree stands just 52" off of the existing driveway. The cut for the new one will run right against the base of the tree severing all the structural roots on its south side. There is no way to work around this tree and still have reasonable access to build the proposed remodel.

The removal of the #582 tree will fall under MICC 19.10.06(3)(a) and MICC 19.10.06(3)(b).

The #583 Norway maple stands 21' W of the NW corner of the existing foundation and 18" S of the north fence line. The north side neighbors (4723 house) built a rear patio between 2012 and 2013 that extended 15' W off the SW corner of their house and to within 5' of the maple. The work would have had have severed structural roots on the tree based on its size and proximity. The 4723 house changed hands in 2016 and the new owners added a 5' wide concrete walkway along the south side of the house further impacting the rooting area.

The proposed addition at the NW corner of the subject home is shown to stretch 25' W (likely the cut for the foundation would extend at least 27' W). The north side of the addition would end up 10' S of the base of the tree. This work would potentially excise near to 900 square feet of the maple's south side rooting area. If this was the only impact on the tree it would be within the 30% loss threshold accepted by the industry and the tree could be retained. However the neighbor has already caused at least 400 square foot of space to be lost. The new impact would likely push the tree into an accelerated decline.

The 4723 property owner also pruned out between a third and half of the maple's total canopy from their side between 2017 and 2019 (as is their technical right). But the loss of this much of its energy production will significantly degrade the maple's ability to replace the lost root mass and deal with the stress of the impact. It is likely that even more of the canopy would have to be pruned back to create clearance for the construction of the addition.

Based on all the factors it is recommended that this tree be allowed to be removed under the same code exemptions as the #582 cedar.

No other significant trees stand within the impact zone of the proposed construction. The #584 pin oak is the closest and it is over 30' away.

The owners of the subject property planted ten Leyland cypress two years ago in expectation of their project moving forward more quickly than it has. They understood that the City of Mercer Island had a replacement schedule for removed trees and wanted theirs to have time to grow while they remodeled. The planted three on the north side of the yard between the #584 maple and the house and seven others along the south property line.

Discussion: Generally speaking all the site trees which are to be retained are protected by laying down layers of arbor mulch to cushion impact to their roots and to prevent soil compaction. The rough rule of thumb is four to six inches of mulch laid down out to 3' past the existing driplines as possible. In this case only #580 birch, the #581 maple, and the three north side Leylands will be treated in this fashion. The other trees are far outside the impact zone.

Typically 6' chain link fencing is installed to designate no impact zones and is placed at the radial distance proscribed by the City of Mercer Island for non-incursion which is one linear foot per linear inch of tree diameter.

Once the existing driveway is removed the fence should be set at the north edge of the new driveway, brought out east to near the street, and stretched west just outside the border of the new garage foundation (Figure 6). It will have to curve north just far enough from the existing NE house corner to allow access to the rear.

Another section of fencing will run parallel to the south edge of the new driveway and then curve to follow the counter of the existing one to the NE corner of the bump out section on the south end of the house.

In the rear it will make more sense to fence in the work space rather than the trees. The fence should start at the north property line, 28' E of the pin oak, run south until it is 30' north of the big firs in the SW corner of the yard, and then turn east to meet the deck. A small section of fencing can be stretched along 3' south of the three Leylands and tuck into the north line 4' out from either end of their line.

According to the City of Mercer Island guidelines the removal the two exceptional class trees calls for planting six replacements each. The City asks that half the plants be NW native varieties. While the home owners already installed the ten Leyland cypress trees the species serves best in a large hedge application and they will only be counted as satisfying two of the required plants. A schematic is shown in Figure 7 that provides a rough guideline for replanting. It is the essence, not the exactitude, of the plan that should be followed.

Certain species of trees grow better with 'companions' and are generally planted in sets of three in the landscape. The area east of the #584 pin oak opened by the removal of the big maple would be a good place to plant a set of Weeping Alaska Cedars (*Cupressus nootkatensis*) which could count as natives. Japanese Cedar (*Cryptomeria japonica*) or Bush's Lace Engelmann Spruce (*Picea Engelmann* 'Bush's Lace') would also work. Golden Splendor Canadian Hemlock (*Tsuga canadensis* 'Golden Splendor') could be striking in this location and also qualify as a 'native'. These are designated 'A' in the schematic. Alternatives include Horstmann Blue Atlas cedar (*Cedrus atlantica* 'Horstmann') and Azurea Lawson's Cypress (*Chamaecyparis lawsoniana* 'Azurea') which can function as a 'native'.

To add depth, additional screening, and color interest three or four Autumn Brilliance Serviceberries (*Amelanchier x grandiflora* 'Autumn Brilliance') could be planted along the west fence line. This varietal of the native serviceberry provides year round color and great habitat for birds and small mammals. Three redbuds (*Cercis canadensis*) could be used instead for the color aspect but they are not as multifunctional habitat wise as the serviceberries. Crepe myrtle (*Lagerstroemia indica*) comes in many different colors and is another decent choice for the space. Placement for this set of plants will be indicated with a 'B' in the schematic.

On the south side of the yard there is space to plant a 'tree of interest'. A maidenhair tree (*Ginkgo biloba*), columnar Copper beech (*Fagus sylvatica* 'Dawyck Purple'), a pair of Japanese Stewartia (*Stewartia pseudocamellia*), or even a Weeping Sequoia (*Sequoiadendron giganteum* 'Pendulum') would fit nicely in the space between the #587 fir and the west end of the row of seven Leyland cypress. The spot will be marked with a 'C' on the planting map.

There is an open area in the SE corner of the yard that would be a good place to install a smaller medium spreading tree with good color. A crepe myrtle or redbud would work as would a Bloodgood Japanese Maple (*Acer palmatum* 'Bloodgood'). A pair, or even a set, of Mountain Hemlock (*Tsuga mertensiana*) could anchor the corner nicely. This spot will be marked as 'D'.

The area between the 4731 and 4723 house will become starkly open and exposed once the cedar and maple are removed. Installing a line of four or five narrow growing evergreen trees along the border will break up bleakness of the space and provide a privacy screen for the homes. Serbian Spruce (*Picea omorika*) would be excellent choices and for added drama the Gotelli Weeping varietal could be used. Placement will be noted with an 'E' in the planting schematic. Korean Fir (*Abies koreana*), especially Aurea or Silver Show, would be good substitutes in this area along with the Columnar Norway spruce (*Picea abies* 'Cupressina') or even columnar magnolia like Teddy Bear or Little Gem (*Magnolia grandiflora* 'Teddy Bear' or 'Little Gem'). The magnolias would have to be trained to only spread east and west via careful pruning.

The majority of the new plants should be in close enough proximity that a metered drip-and-ring watering system will be most efficient. Supplemental water should only be necessary during the local dry season, late June to early October, and only for the first three years or so.

Waiver of Liability Because the science of tree risk assessment is constantly broadening its understanding, it cannot be said to be an exact science. Every tree is different and performing tree risk assessment is a continual learning process. Many variables beyond the control, or immediate knowledge, of the arborist involved may adversely affect a tree and cause its premature failure. Internal cracks and faults, undetectable root rot, unexposed construction damage, interior decay, and even nutrient deficiencies can be debilitating factors. Changes in circumstance and condition can also lead to a tree's rapid deterioration and resulting instability. All trees have a risk of failure. As they increase in stature and mass their risk of breakdown also increases, eventual failure is inevitable.

While every effort has been taken to provide the most thorough and accurate snapshot of the trees' health, it is just that, a snapshot, a frozen moment in time. These findings do not guarantee future safety nor are they predictions of imminent events. It is the responsibility of the property owner to adequately care for the tree(s) in question by utilizing the proper professionals and to schedule future assessments in a timely fashion.

This report and all attachments, enclosures, and references, are confidential and are for the use of the FFWD, Inc, Sandra and Trevor Selby and their representatives only. It may not be reproduced, used in any way, or disseminated in any form without the prior consent of the clients concerned.

Anthony Moran, BS
ISA Certified Arborist
#PN-5847A

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Plant #	Tree Dia 10" min	Tree Dia 24" min	Exceptional	Species	Vigor	Retained	Removed	Location
580		13,13.5,14.5		<i>Betula pendula</i>	fair	x		onsite
581		27.5		<i>Acer platanoides</i> 'Crimson King'	good	x		onsite
582			46	<i>Thuja plicata</i>	fair		x	onsite
583			30.5	<i>Acer platanoides</i> 'Crimson King'	fair		x	onsite
584		28		<i>Quercus palustris</i>	fair	x		onsite
A			30	<i>Pseudotsuga menziesii</i>	fair	x		offsite
585			30.5	<i>Pseudotsuga menziesii</i>	fair	x		onsite
586			32.5	<i>Pseudotsuga menziesii</i>	fair	x		onsite
587			33	<i>Pseudotsuga menziesii</i>	fair	x		onsite
B*		3(x10)		<i>Cupressus x leylandii</i>	good	x		onsite

* planted in preparation for this project

Figure 1. Tree table with correct sizes and species. The 'A' and 'B' items were not included in the original arborist report from Laughing Trees.



Figure 2. Aerial image circa 2019 with the rough placement of the subject trees denoted.

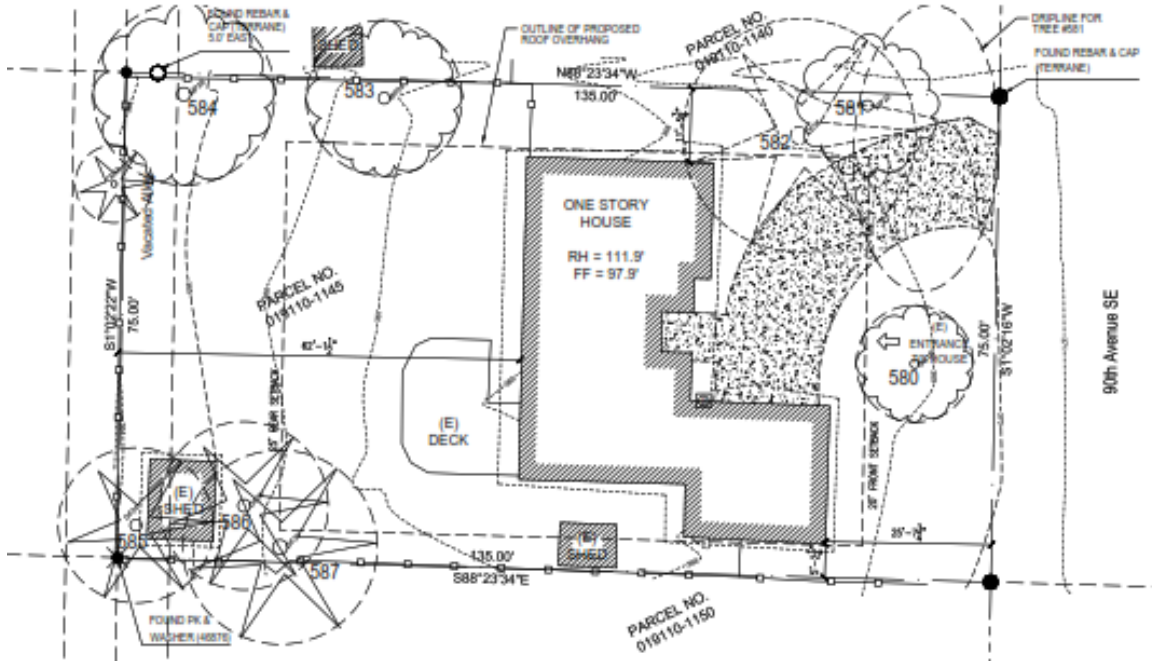


Figure 3. Excerpt from the survey showing the locations of the subject trees. The 'A' and 'B' trees were not included.

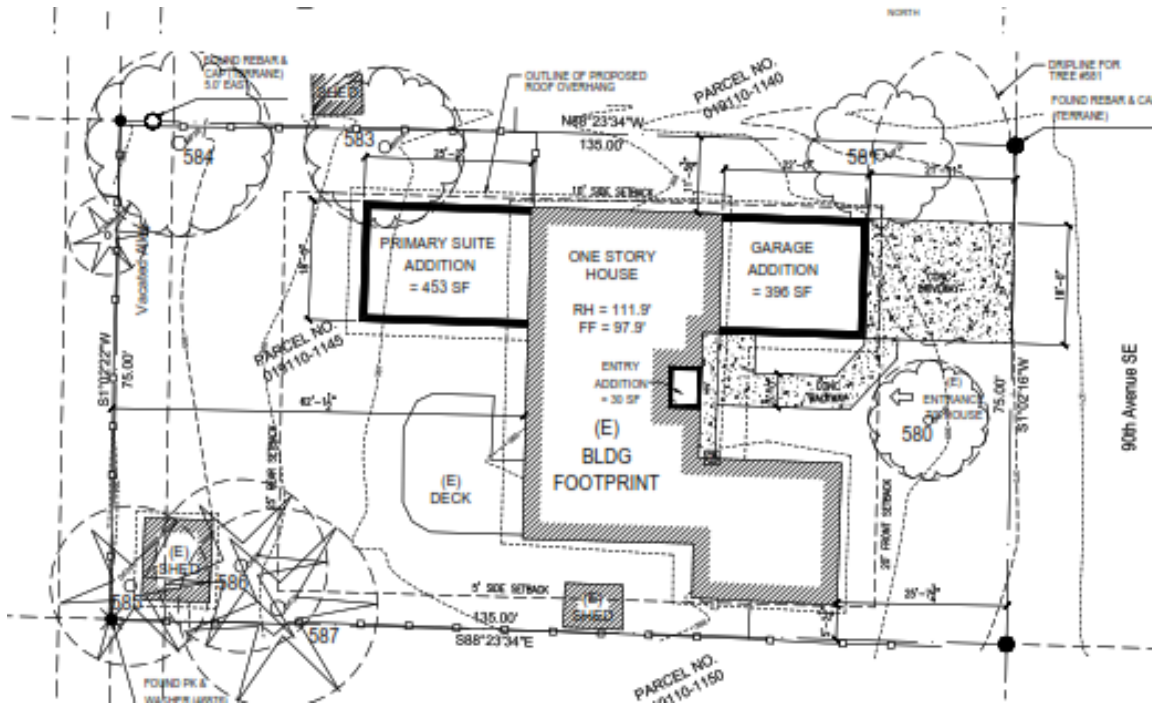


Figure 4. Excerpt from the proposed site plan showing the new layout.



Figure 5. Looking down and north at the roots from the #581 maple growing along the north edge of the existing driveway.

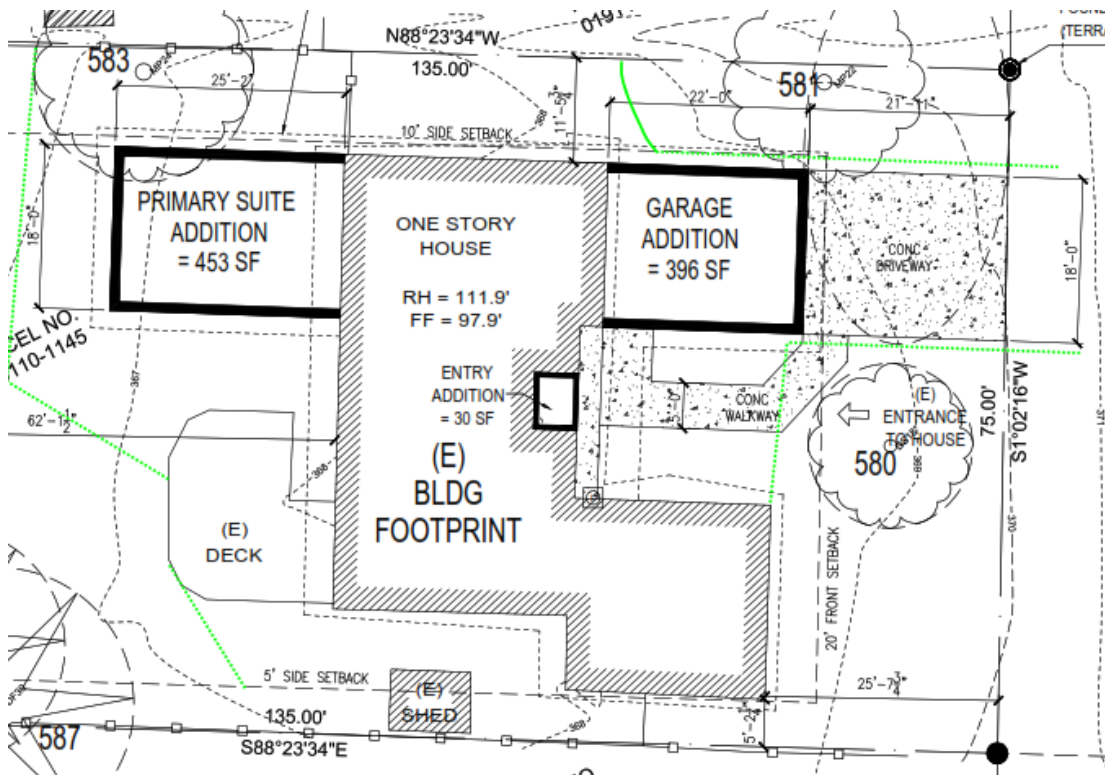


Figure 6. The faint green lines indicate the rough placement of the tree protection fencing.



Figure 7. Rough planting schematic showing the locations alluded to in the 'Discussion' section of the report. The annotations do not dictate a specific species of plant rather the area where one of a number of different trees could be installed.

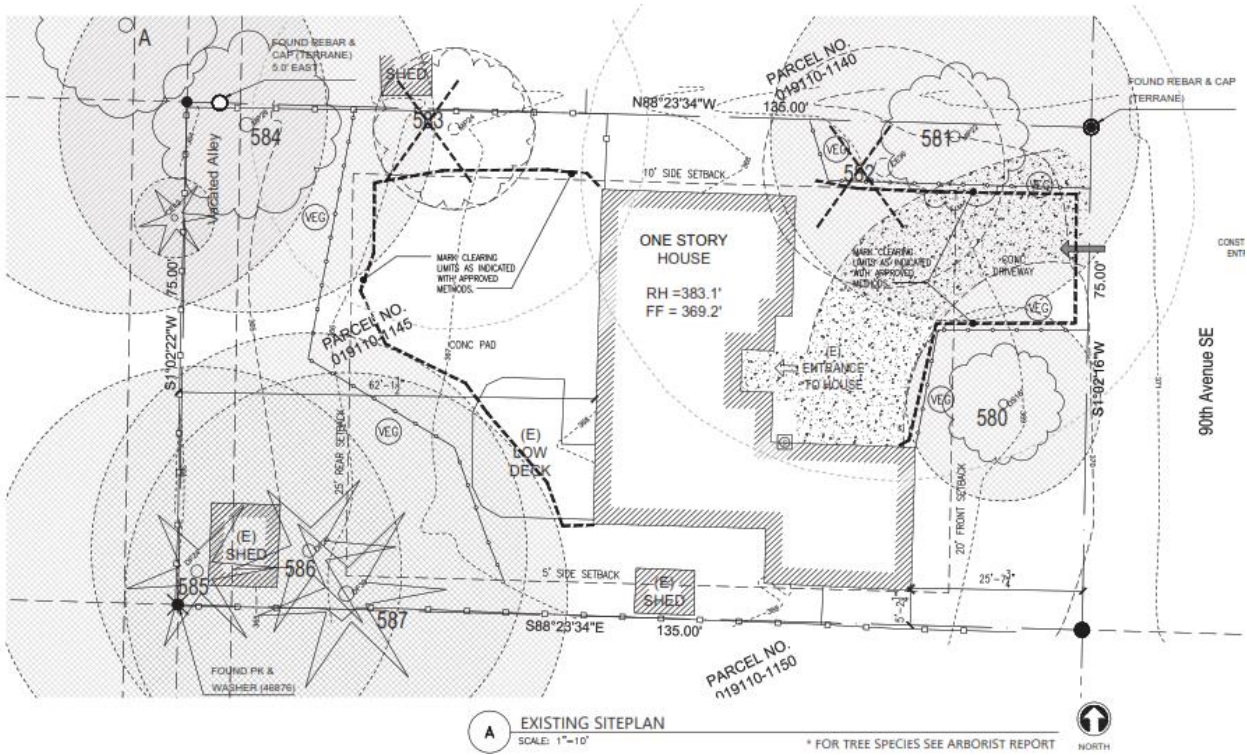


Figure 1. Excerpt from the new version of the 'Existing Site Plan'.

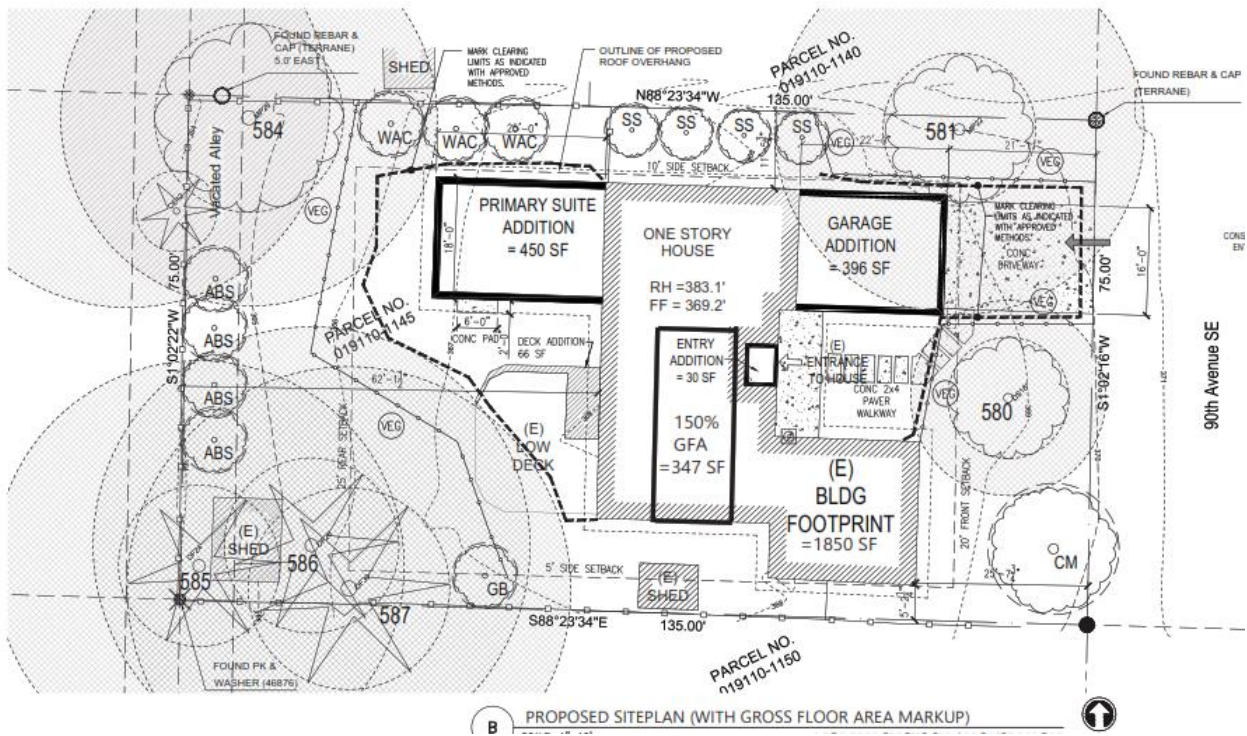


Figure 2. Excerpt from the new version of the 'Proposed Siteplan'.



Superior NW Enterprises

March 1, 2024

RE: Latest plan set review for remodel at 4731 90th Avenue SE. PN-0191101145.

To Whom It May Concern:

A comprehensive tree protection plan was prepared and submitted in August of 2023 for this site along with the initial plan set. Comments from the City of Mercer Island planning department led to the formation of a more comprehensive plan set. I have studied the new sheets and find them to more illustrative of the needs of the trees at this site.

As requested by the City arborist the new set shows the locations of all the site trees clearly along with their CRZs and protection requirements. Exceptional site trees are noted with an 'EX'. The locations of the proposed replacement trees are also shown (Figures 1 and 2).

The updated sheets more clearly show the reasoning behind the two tree removals and why the #582 tree falls into situation covered by MICC 19.10.06(3)(a) and MICC 19.10.06(3)(b). There is no reasonable way to access the site in order to proceed with the project with the #582 tree present and it prevents the property owner from using the building space available to them.

It should be noted that the numbers of replacement trees significantly exceeds the required amount.

Please let me know if you have any questions.

Anthony Moran
ISA Certified Arborist
PN-5847A

July 12, 2023

To Whom it May Concern Regarding Tree Permitting,

I am writing regarding the pre-application meeting for our house remodel project at 4731 90th Ave SE, Mercer Island. The construction area is near 3 large trees on the lot. I had been working with an arborist, Kim Ettari from Laughing Trees Landscapes. Last year I commissioned her to do a full arborist report of the trees on the lot with recommendations for the trees likely to be impacted. At that time our plans were still being developed. She completed that report in April of 2022 and we are submitting that report for the pre-application meeting. However, since then our plans have continued to be worked out and the scope specified. Kim is currently unable to further follow up on her report and, therefore, I reached out to a new arborist to assist. I have recently spoken with Anthony Moran from Superior NW Enterprises who has seen the arborist report, the current construction plans, done a visit to the property and viewed the trees on the lot. Anthony will write amendments, with new recommendations, to the original report now that we have more accurate plans.

Arborist Anthony Moran will be available to participate in the preapplication meeting and to discuss his recommendations further. He will document his recommendations when we submit our plans for permitting. He can further elaborate in person on his findings in our pre-app meeting so that we can verify our approach. Upon reviewing the plans and the actual site, he has communicated to me that the exceptional cedar tree (#582) will need to be removed related to its proximity to the proposed garage. However, he feels we can retain trees #581 and #583 by taking reasonable precautions. He has agreed to include details of this process in his report. He will be on site during excavation to ensure the proper measures are taken to protect the tree's root structure. Furthermore, per his recommendations we will submit a precise replacement tree plan due to removal of the cedar (#582).

We are looking forward to reviewing these matters in the preapplication meeting to make sure we will be in compliance.

Sincerely,

Sandra Selby
Home owner
4731 90th Ave SE
Mercer Island 98040
609-751-1323